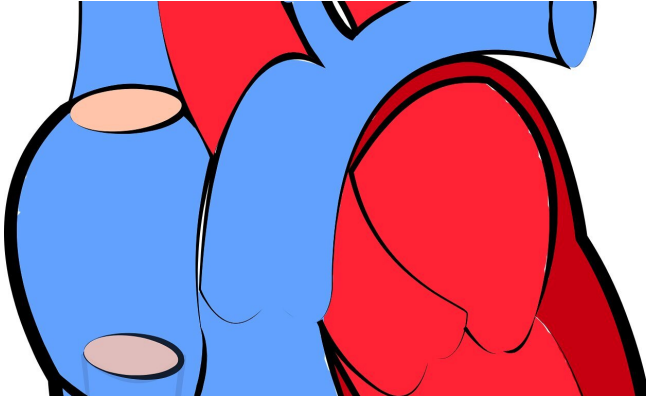


# Congenital heart defects may not increase the risk of severe COVID-19 symptoms

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Adults and children born with heart defects had a lower-than-expected risk of developing moderate or severe COVID-19 symptoms, finds a study of more than 7,000 patients from the congenital heart disease center at Columbia University Vagelos College of Physicians and Surgeons.

Throughout the course of the pandemic, evidence has shown that individuals with heart [disease](#) have a higher risk of life-threatening illness and complications from COVID-19. But the impact of SARS-CoV-2 infection on individuals with congenital [heart defects](#), who are generally younger than those with adult-onset heart disease, was unknown.

About 1% (40,000) of babies born each year in the United States have one or more heart defects.

"At the beginning of the pandemic, many feared that congenital heart disease would be as big a risk factor for severe COVID-19 as adult-onset cardiovascular disease," says Matthew Lewis, MD, assistant professor of medicine at Columbia University Vagelos College of Physicians and Surgeons and co-leader of the study. "We were

reassured by the low number of congenital heart [patients](#) who required hospitalization for COVID-19 and the relatively good outcomes of these patients."

## Few congenital heart patients had COVID-19

Only 53 congenital heart patients (43 adults and 10 children)—less than 0.8% of patients at Columbia's congenital heart center—presented to their physician with symptoms of SARS-CoV-2 infection from March through June. (During the study period, an estimated 20% of people in the New York metropolitan area are thought to have been infected with the coronavirus.)

More than 80% (43) of these patients had mild symptoms. Of the 9 patients who developed moderate to severe symptoms, 3 died. (Another study performed at Columbia University Irving Medical Center during the same period found that roughly 22% of hospitalized patients from the general population became critically ill and about one-third of those patients died.)

In the new study, the researchers found that patients with a genetic syndrome and adults with advanced disease from their [congenital heart defect](#) were more likely to develop moderate to severe symptoms, though an individual's type of congenital heart defect did not impact symptoms severity.

Though the study sample was small, the researchers conclude that congenital heart disease alone may not be enough to increase the risk of severe COVID-19 symptoms.

## Caveats

It's unlikely that people with congenital heart disease have an intrinsically lower risk of becoming severely ill from the new coronavirus, and the researchers hypothesize that the patients in this study may have adhered more strictly to social

distancing guidelines compared with the general population, given the publicity about increased COVID-19 risk in patients with heart disease. The researchers caution that individuals with [congenital heart disease](#) should continue to practice strict social distancing and follow all CDC guidelines as these measures are likely contributing to the study findings.

They also note that the younger average age (34 years) of these patients and lower incidence of acquired cardiac [risk factors](#) compared with other individuals who had severe COVID-19 may explain why fewer congenital [heart](#) patients than expected had [severe symptoms](#).

"It's possible that elderly patients with congenital [heart disease](#) might have a different risk profile than the [general population](#)," adds Brett Anderson, Florence Irving Assistant Professor of Pediatrics at Columbia University Vagelos College of Physicians and Surgeons and co-leader of the study. "We have yet to define what those risk factors are."

**More information:** Matthew J Lewis et al, The Impact of Coronavirus disease 2019 (COVID-19) on Patients with Congenital Heart Disease across the Lifespan: The Experience of an Academic Congenital Heart Disease Center in New York City, *Journal of the American Heart Association* (2020). [DOI: 10.1161/JAHA.120.017580](https://doi.org/10.1161/JAHA.120.017580)

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